Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In The Matter of	)	
	)	
Structure and Practices of the Video Relay Service Program	)	CG Docket No. 10-51
	)	

COMMENTS OF SORENSON COMMUNICATIONS, INC.

I. INTRODUCTION

Sorenson Communications, Inc. ("Sorenson") hereby comments in response to the Federal Communications Commission's ("Commission") Consumer and Governmental Affairs Bureau's ("Bureau") Public Notice regarding the application of new and emerging technologies for Video Relay Service ("VRS") use.[1] Specifically, the Bureau has sought comment on questions related to the ability of consumers to use commercial "off-the-shelf" equipment in connection with VRS services.

For the first ten years since the FCC authorized VRS as a form of telecommunications relay service,[2] specialized equipment provided by VRS providers has been the key to growth in the adoption and popularity of VRS as a means of communication for the deaf, hard of hearing and speech disabled who use American Sign Language. Since Sorenson created the VP-100 in 2002 and launched its video relay service in 2003, VRS usage has grown from almost nothing to

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1 *Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, Public Notice, DA 11-317 (rel. February 17, 2011) ("PN").

2 *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CC Docket No. 98-67, Report and Order and Further Notice of Proposed Rulemaking, FCC 00-56, ¶¶ 21-22 (rel. March 6, 2000).

more than 8 million minutes per month, with many times more minutes of point-to-point calling. Sorenson facilitated the adoption of the most functionally equivalent relay service by providing equipment that was designed to make use of VRS convenient and highly functional. This meant optimizing the device for VRS service, developing convenient ways to signal callers, features such as contact lists and sign mail, dedicating voice bandwidth to video, and many other improvements for deaf, hard of hearing or speech impaired users.

In its second decade, however, the VRS market – and Sorenson – are moving to embrace commercial "off-the-shelf" equipment robustly, especially as mobile devices adopt front-facing cameras and upgrade to 3G and 4G mobile networks, with data transmission speeds that permit video conferencing. For example, Sorenson recently launched the ntouch Mobile product for HTC EVO Android™ phones, a software-based product. It also launched ntouch PC, another software-based application which will allow consumers to use their laptops and netbooks as videophones for VRS and point-to-point calls. These are exciting advances in VRS technology benefitting deaf users.

This is the way of the future, especially for mobile services. Sorenson does not anticipate manufacturing its own mobile handsets. At present, ntouch Mobile is available for the HTC EVO Android™ phones, which is commercially available through Sprint. Users purchase their own HTC EVO Android™ phones and data plans and download ntouch Mobile from the Android™ Marketplace.

Sorenson designed ntouch PC and ntouch Mobile to comply with the Commission's VRS rules, most importantly, its emergency calling rules. Deaf, hard of hearing and speech disabled users can use these products to place 911 calls through Sorenson's Video Interpreters to the PSAP associated with their Registered Location. As required by the Commission's rules,

Sorenson provides a way for its users to change their registered locations from the handset or computer onto which the ntouch software is loaded. ntouch PC and ntouch Mobile are also capable of interoperability with other VRS providers, and support point-to-point communications with other providers' VRS end points. Sorenson also designed the products and their systems to register the 10-digit and any toll-free numbers for ntouch PC and ntouch Mobile endpoints with the iTRS database to facilitate such communications.[3]

The use of commercial "off-the-shelf" equipment, services, and software to provide VRS is not an area in need of new regulation. VRS providers that create software applications for commercial "off-the-shelf" equipment have an incentive to make sure that their users know what equipment can be used with their services. They also have an incentive to make their services compatible with a broad range of equipment so that users can use their services with endpoint devices that fit their needs. Moreover, competing VRS providers can all design for any open platforms.

Sorenson does believe that industry standardization based on SIP, with appropriate extensions to address mandatory VRS capabilities not covered in the SIP standard, could be positive for the industry, as well as facilitate the adoption and use of commercial "off-the-shelf" equipment. To facilitate that result, any group developing such standards should include commercial "off-the-shelf" equipment manufacturers in addition to VRS providers. There would, however, need to be an adequate period for transition to SIP to avoid disruption to deaf and hard-of-hearing users.

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[3] *See* Letter of Sorenson Communications, Inc., CG Docket Nos. 10-51 and 03-123 (filed April 1, 2011).

II. COMMERCIAL OFF-THE-SHELF FEATURES/FUNCTIONS AND BROADBAND SPEEDS

A deaf, hard of hearing or speech disabled consumer can use VRS service today with commercial "off-the-shelf" equipment, provided that the equipment has a forward-facing camera, a broadband Internet connection, and the ability to load, store and run compatible software. Of course, a VRS provider must have made available a compatible software product. As referenced above, Sorenson currently has software applications that utilize, respectively, a Windows operating system and an Android™ operating system. Commercial "off-the-shelf" features/functions, as well as the range of compatible software, will evolve with time and as technology advances.

Minimum broadband speeds will likely vary with the hardware and software being used. For instance, when Sorenson designed its VP-200 videophone, it allocated bandwidth that would normally be used for voice to video in order to reduce the amount of bandwidth needed for an adequate level of performance. In general, these devices should provide adequate service at minimum Internet speeds of 256 kbps. Of course, performance is less likely to be affected by other simultaneous uses if the consumer can obtain a higher speed broadband service. ntouch Mobile is designed to work with Sprint's 3G and 4G data services, as well as over Wi-Fi connections.

In terms of a camera, while pan, tilt, zoom is certainly helpful to many users, it is possible to use VRS without pan, tilt, zoom. With respect to lux levels, this is something the Commission should leave to consumer choice in the marketplace. Low lux cameras are generally more expensive than ones that require more light. Some consumers do not need low lux capabilities and will find cheaper cameras to be adequate. Other consumers may need low light performance. The Commission should not attempt to specify a minimum lux level.

The same is true for the number of frames per second. In Sorenson's experience, 24 frames per second can provide adequate service. But the choice of camera frame speed should be left to consumers to choose what best fits their needs and budgets.

III. CONSUMER USE OF COMMERCIAL OFF-THE-SHELF EQUIPMENT

Sorenson expects that consumers' use of commercial "off-the-shelf" endpoints will increase, particularly for various types of mobile applications, whether through Wi-Fi or through licensed mobile carriers' 3G and 4G services. There is no reason to expect that deaf, hard of hearing and speech disabled consumers will be any less attracted to the convenience and utility of mobile applications than the rest of the population.

VRS services provided via commercial "off-the-shelf" technology should be – and are today – subject to the same rules as VRS services provided through specialized end points, including access to 911, 10-digit number assignment, porting, the ban on impermissible incentives, and support for point-to-point communications based on 10-digit dialing.[4] As discussed above, Sorenson has ensured that its software applications, ntouch Mobile and ntouch PC, meet these requirements.

Nonetheless, there are VRS providers that offer software-based VRS applications for use with commercial "off-the-shelf" devices that do not meet the Commission VRS mandates, even including complying with 911 and E911 rules. For instance, a VRS provider initially used Apple's FaceTime without modifying it to provide VRS. As the Commission's Enforcement

[4] Sorenson agrees with other providers that there is no need for an interoperability mandate for software applications designed for open platforms, as the consumer can simply download the application from whichever VRS provider it wants that has designed for that platform.

Bureau has made clear through its recent public notice, VRS software must comply with the 911 requirements.[5]

IV. CONCLUSION

Sorenson is excited about its recently-launched software-based products, and believes that such products represent exciting advances in VRS technology benefitting deaf users who are able to use those products with commercial "off-the-shelf" equipment. As the VRS market moves to more widespread and robust use of commercial "off-the-shelf" solutions, Sorenson hopes that the Commission will continue to work to ensure that all software endpoints used with commercial "off-the-shelf" equipment, services, and/or software comply with the Commission's VRS rules, and looks forward to coordinating with the industry to agree upon a SIP standard to allow for even more commercial "off-the-shelf"-based VRS solutions in the future.

Respectfully submitted,

/s/

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[5] *See Enforcement Bureau Reminds Internet-Based Telecommunications Relay Service Providers of Emergency Calling Requirements*, Enforcement Advisory No. 2011-05, DA 11-304 (rel. February 16, 2011).